

KARSAI, Karoly, dr., a muszaki tudományok kandidátusa

Machining of cold-rolled transformer sheets. Villamosag 13  
no.3:73-78 Mr '65.

1. Transformer Factory Unit of Ganz Electric Works.

KARSAI, L.

"Artificial insemination of sheep." p. 564. (Termeszeti es Technika, Vol. 112, no. 9, Sept 53, Budapest)

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Uncl.

KARSAI, Lajos

Execution of proposals delivered at the 3d National Conference of Trade-Union Stewards. Munka 8 no.12:11 D '58.

1. Szakszervezetek Orszagos Tanacsa Tanacsado Iroda vezetoje.

KARSAI, Laszlo

Some problems of the innovation movement. Bor cipo 10  
no.2:44-45 Mr '60.

1. KIM, Iparfejlesztési Főosztály.

CZECHOSLOVAKIA

BLASKOVIC, D. and KARSAL, J.: [Virology Institute of CSAV, Bratislava.]

"Tick-Borne Encephalitis Epidemiology in the Former Zlate Moravce District."

Bratislava, Biologicke Prace, Vol 8, No 9, 1962; pp 38-45.

Abstract [English summary modified]: Reports and discussion of data from the case histories of 27 hospitalized patients aged 6 to 63 with presumptive diagnosis of tick-borne encephalitis (14 in 1955, 8 in 56, 1 in 57, 4 in 58) in the Zlate Moravce district. Spread through drinking goat milk (raw) was considered confirmed and in fact responsible for a family outbreak, although this mode of infection is thought to be less frequent than by tick-bite. All patients recovered.

KARSAI, Laszlo

Some problems relating to the innovation movement. Bor cipo  
10 no.2:44-45 Mr '60.

1. Konnyuipari Miniszterium Iparfejlesztési Fosztalya.

KARAI, I.

"Questions of the Quality of Iron Cores for Transformers", P. 207,  
(VILLATISSAG, Vol. 2, No. 7, July 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3,  
March 1955, Uncl.

KARSAI, Tibor

"Short-circuit processes" by Fridrich Schnessl. Reviewed by  
Tibor Karasi. Elektrotechnika 53 no.5/6:277-278 '60.



KARSAI, Zoltan, Dr.

Antihistaminic therapy of caustic poisonings in adults. Orv. hetil.  
99 no.14:483-484 6 Apr 58.

1. A Fovarosí Koranyi Sándor és Frigyes Kózkórház Baleseti Belgyógyas-  
zati Osztályának (főorvos: Balázs Gyula dr. egyet. tanár) közleménye.  
(CAUSTICS, pois.  
ther., synopen in adults (Hun))  
(ANTIISTAMINICS, ther. use  
synopen in pois. by caustics in adults (Hun))

KARSHK, Yu. Ye

ARBUZOV, N.T., kand.tekhn.nauk; GROMOV, V.I., kand.tekhn.nauk; GORSKIY, B.Z.,  
kand.tekhn.nauk; KALISHCHUK, A.L., kand.tekhn.nauk; KUHITSKIY, L.P.,  
kand.tekhn.nauk; KURBATOV, D.I., kand.tekhn.nauk; MOROZOV, N.V., kand.  
tekhn.nauk; PILYUGIN, A.I., kand.tekhn.nauk; PRIMAK, N.S., kand.tekhn.  
nauk; SEMENTSOV, S.A., kand.tekhn.nauk; ULITSKIY, I.I., kand.tekhn.  
nauk; KHUTORYANSKIY, M.S., kand.tekhn.nauk; SHERENTSIY, A.A., kand.  
tekhn.nauk; PINSKIY, Ye.A., inzh.; KARSAK, Yu.Ye., red.; PATSALYUK,  
P.M., tekhn.red.

[Civil engineering handbook] Spravochnik po grazhdanskomu stroitel'-  
stvu. Izd. 3-e, perer. i dop. Kiev, Gos. izd-vo tekhn. lit-ry USSR  
Vol. 1. 1958. 867 p. (MIRA 11:5)

(Civil engineering--Handbooks, manuals, etc.)

KARSAKOV, A.

Labor and Laboring Classes

Creative harmoning among scientific and production workers. Prof. soiuzy, No. 2, 1952.

Monthly List of Russian Accessions. Library of Congress, March 1952. Unclassified.

KARSAKOV, A.

Raise socialist competition to a new level. Sov.profsoiuzy 4  
no.2:9-15 F '56. (MLRA 9:5)

1. Zamestitel' zaveduyushchego Otdelom proizvodstvenno-massovoy  
raboty Vsesoyuznogo TSentral'nogo Soveta professional'nykh soyuzov.  
(Socialist competition)

MAKHARADZE, Sh.K.; KUTATELADZE, N.M.; CHUDIBIDZE, A.I.

Experimental coronary angiography. Trudy Inst. Klin. i ek per.  
kard. AN Gruz. SSR 8:559-563 '63. (MIRA 17:7)

1. Institut kardiologii AN GruzSSR, Tbilisi.

KARSANOV, A.N.

Aerodynamic stand for testing turbodrill turbines. Neft:  
khoz. 42 no.1:64-66 Ja'64. (MIRA 17:5)

BARANOV, A.S.; KARSANOV, B.Kh.

Effectiveness of sugar-beet seed production without transplanting  
beet seedlings. Sakh.prom. 35 no.7:59-61 J1 '61. (MIRA 14:7)

1. Korenovskoye opytnoye khozyaystvo Vsesoyuznogo nauchno-issle-  
dovatel'skogo instituta sakharney svokly. 2. Kubanskiy  
sel'skokhozyaystvennyy institut (for Karsanov).  
(Sugar beets)

KARSANOV, Gordey Vasil'yevich; FROLOV, A.A., redaktor; CHERNYAK, I.G.,  
redaktor; VAYNSHTEYN, Ye.B., tekhnicheskii redaktor

[The iron-alloy smelter's manual] Plavil'shchik ferrosplavov.  
Moskva, Gos. nauchno-tekhn. izd-vo lit'-ry po cherno i tsvetnoi  
metallurgii, 1954. 267 p. [Microfilm] (MLRA 8:2)  
(Iron alloys—Metallurgy)



KARSAV, G. V.

Aluminum-calcium alloy. V. A. Bonch-Bruyevich and G. V. Karasav. U.S.S.R. 119,101. Feb. 14, 1953. Al-Ca alloy contg. 14-20% Ca and used for improving the heat-resistant properties of high-temp. alloys. It is made to contain 22-8% Ba. The alloy is smelted from  $Ba(NO_3)_2$ , freshly burned limestone, and pure Al powder.

M. Elsch

istr: '4E4j/4E2c

S/080/61/034/008/008/018  
D204/D305

AUTHORS: Orlova, S.Ye., Karsanov, G.V. and Vorob'yeva, A.S.  
TITLE: Study of buffer properties, electrical conductivity  
and the cathode process in solutions of chromium  
chloride in hydrochloric acid  
PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 8, 1961,  
1759-1764

TEXT: Production of Cr metal by electrolysis of its trivalent compounds has several advantages over the electrolysis of the hexavalent compounds. Electrolysis of  $\text{CrCl}_3$  solutions has particular interest, since, in addition to producing the metal, chlorine is also produced at the anode, which can be utilized in the chlorination cycle of chrome ores. Technical and economic calculations show that production of  $\text{CrCl}_3$  by ore chlorination is much cheaper than well-known methods of chrome ore treatment. The object of the work reported in the present paper was to study the effect of various additives in improving the electrodeposition of Cr metal from

Card 1/3

S/080/61/034/008/008/018  
D204/D305

Study of buffer properties...

$\text{CrCl}_3$  in  $\text{HCl}$  solutions. The additives studied were: urea,  $\text{NH}_4\text{Cl}$ ,  $(\text{NH}_4)_2\text{SO}_4$ ,  $\text{NH}_4\text{BF}_4$  and  $\text{NH}_4\text{F}$ . Buffer properties were studied by adding small portions of 3N  $\text{HCl}$  to 100 ml of solution, with continuous mixing, measuring pH value potentiometrically after each such addition. Electrical conductivity of the solutions was measured by a compensation technique. The conductivity of pure  $\text{CrCl}_3$  solution varies only slightly with its concentration; addition of buffering compounds increases its conductivity considerably. It was found that addition of  $\text{NH}_4\text{Cl}$  does not impart the required character to the electrolyte and that  $\text{NH}_4\text{F}$  and  $\text{NH}_4\text{BF}_4$  are the most effective additives for the purpose studied. Solutions containing them have high buffer capacities in the requisite pH range of 1.7 - 2.2 and higher electrical conductivity. Cathodic polarization determination showed that with these two additives, Cr deposition takes place at a lower current density (4 - 5  $\text{A}/\text{dm}^2$ ) than with other additives and with a current efficiency of 39 - 40%. The metal obtained was light in color and dense in nature. There are 3 figures, 3 tables and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. The refer-

Card 2/3

Study of buffer properties...

S/080/61/034/008/008/018  
D204/D305

ence to the English-language publication reads as follows: H.R.  
Carveth and W.R. Mott, J. Phys. Chem., 1905, vol. 9, 231.

SUBMITTED: July 25, 1960

Card 3/3

S/133/60/000/004/004/010  
A054/A026

AUTHORS: Karsanov, G.V.; Tirkina, A.N.; Odoyevskiy, L.S.

TITLE: Investigation of the Process of Chrome Metal Production<sup>1</sup> in a Vacuum

PERIODICAL: Stal', 1960, No. 4, pp. 321 - 327

TEXT: Considerable attention is being paid to the production of chrome metal by reducing its oxides with carbon in vacuum. The problem was reported on by Salli (Ref. 2), Gel'd, Vlasov and Serebrennikov (Ref. 4), Yesin and Gel'd (Ref. 5) and Vertman and Samarin (Refs. 6 and 7). In order to establish the technology and the parameters for this process, tests were carried out by TsNIIOhM. A thermodynamic analysis of the reactions possible in the chrome-oxygen-carbon system showed that only a higher carbide of chrome ( $Cr_3C_2$ , 13.34% C) could subsist in equilibrium, upon reducing chrome oxide by carbon (with and without vacuum) in the presence of a surplus of carbon. By decreasing the pressure in the reaction zone it was possible to reduce the temperature required for reduction and also to ensure the subsequent decarbonization of carbides by chrome oxide, while obtaining a metal of low C

Card 1/4

S/133/60/000/004/004/010  
AC54/A026

# Investigation of the Process of Chrome Metal Production in a Vacuum

content. The tests established the stability range of chrome carbides as a function of the changes in pressure and the temperature. At 1,400°C and pressures under 15 mm Hg in the presence of chrome oxides only solid solutions of carbon in chrome were stable. It was found that a metal with a C constant of about 0.02% could be obtained at 1,400°C and a pressure of 1 mm of mercury. High vacuum was limited by the great elasticity of chrome vapors. The chrome-oxide-carbon reaction in vacuum took place with the aid of the gas phase according to two-stage process and displayed an adsorptive-autocatalytic character. In the first stage of reduction a metallic phase may form, whereas the introduction of C in the crystal lattice of the metal with the formation of carbides takes place in the secondary stage in which the gas phase participates. The completeness of the process and consequently the quality of the metal produced depends on the kinetics of the final reduction period in which the product is decarbonized by chrome oxide. In this period diffusion is of great importance. Chrome oxides of the following composition were tested: Sample 2276: FeO 0.028%; SiO<sub>2</sub> 0.04%; S 0.070%; C 0.020%; H<sub>2</sub>O 0.08%; Sample 2370: FeO 0.070%; SiO<sub>2</sub> traces, S 0.038%; C

Card 2/4

S/133/60/000/004/004/010  
A054/A026

Investigation of the Process of Chrome Metal Production in a Vacuum

0.11%, H<sub>2</sub>O 0.03%. Pitch coke and charcoal dried and ground to 0. - 0.15 mm were applied as reducing agents; the samples were pressed and briquetted into pieces of 35 mm in diameter and each containing 50 g of chrome and sufficient reducing agents. For the coke treatment a 5% aqueous solution of chrome anhydride ( 4 ml for 100 g chrome oxide) and for the charcoal treatment an aqueous solution of molasses (20 ml for 100 g chrome oxide) were applied as binding agents. The test equipment contained an apparatus simulating a TBB(TVV) type vacuum pot kiln, a U-MMM-1 (TsNIICHM-1) type tungsten-molybdenum thermocouple, BH-2 or BH-1 and BH-3 type (VN-2, VN-1 and BN-3) vacuum pumps, a BT-2 (VT-2) type vacuum gauge. The kinetics of the process were tested by the amount of gas separated during the reaction. An inverse relation between the C content and the oxygen content of the produced metal was established. During the one-stage reaction a metal with a low carbon content (0.02 - 0.03%) was produced. In the initial stage the reduction of chrome oxide developed rapidly, while carbides formed which were decarbonized due to the interaction with chrome oxide. The decarbonization of chrome carbides (mainly of Cr<sub>23</sub>C<sub>6</sub>) and of the C solutions in chrome was the

Card 3/4

S/133/60/000/004/004/010  
A054/A026

Investigation of the Process of Chrome Metal Production in a Vacuum

most important feature of the entire process. The effect of temperature, the quality of reducing agents, the fineness of the particles of chrome oxides and the rate of vacuum as the main parameters of the process were also investigated. Upon comparing the test results, the priority of the technological process with two stages could be ascertained, where in the first reduction stage no vacuum is applied, whereas in the second (after repeated grinding to 0 - 0.15 mm) and briquetting (without binding agents) the product is treated in vacuum. When reducing chrome oxide by carbon at 1,300 - 1,400°C temperature and atmospheric pressure with a charge of such a composition that the decarbonization of the metal in a vacuum can be obtained, a product containing 5.2 - 6.8% C and 7.0 - 8.2% oxygen, mainly  $\text{Cr}_7\text{C}_3$  and a surplus of chrome oxide will be produced. The process takes two hours at 1,300°C and 1.5 hours at 1,400°C, inclusively 1 hour of heating up to the required temperature. Repeated grinding and briquetting before the vacuum treatment promotes the diffusion of the reagents. The metal produced has a low C content and a still lower residual amount of oxygen (about 0.5%). There are 11 figures and 11 references: 9 Soviet and 2 English.

ASSOCIATION: TsNIICHM

Card 4/4



KARSANOV, G. V.

Cand Tech Sci - (diss) "Study of the process of producing metallic chromium in vacuum." Dnepropetrovsk, 1961. 15 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Dnepropetrovsk Order of Labor Red Banner Metallurgical Institute imeni I. V. Stalin); 180 copies; price not given; (KL, 7-61 sup, 237)

S/137/62/000/005/041/150  
A006/A101

AUTHORS: Magidson, I. A., Karsanov, G. V., Gerasimova, M. I., Kalmykova, T. V.

TITLE: Developing technological schemes of the chlorination process of chrome ore

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 24 - 25, abstract 5G156 ("Metallurg. i khim. prom-st' Kazakhstana. Nauchno-tekh. sb." 1961, no. 4 (14), 15 - 23)

TEXT: Two technological schemes of obtaining dehydrated Cr chloride by chlorination of Cr ore were checked in large-scale laboratory tests. Scheme 1 was based on the possibility of using a shaft chlorinator with a through muffle permitting the continuous unloading from the apparatus of the solid unchlorinated residue; scheme no. 2 is based on the use of a shaft electric resistance furnace. In this case  $MgCl_2$  formed during chlorination must be filtered through a porous bottom-checker and removed from the furnace in the form of a liquid melt. Several experiments by scheme 1 were conducted at 18 - 48 hour duration of the process. Chlorination was performed at  $950^{\circ}C$  and 0.5 liter/min  $Cl_2$  supply

Card 1/2

Developing technological schemes of...

S/137/62/000/005/041/150  
A006/A101

rate. The size of coke particles was  $-2+1$  mm, the coke-to-ore ratio was 1.5 : 1, the height of the charge column to be chlorinated was 150 mm. The average Cr extraction from the ore was 98 - 99%. Cr extraction into "pure" fraction of Cr chloride was 75-78%. Cr extraction from the ore according to scheme 2 attained 98%. At an increased rate of the gas flow in the chlorinator, extraction increased up to 99.0 - 99.8%. Cr extraction into "pure" fraction attained 80%. There are 16 references.

G. Svodtseva

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/004/031/201  
A006/A101

AUTHORS: Mikhina, V. N., Karsanov, G. V.

TITLE: Preparation of chromium metal by electrolysis from hexavalent and trivalent chrome compounds

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 28-29, abstract 4G181 ("Metallurg. i khim. prom-st' Kazakhstana. Nauchno-tekhn. sb." 1961, no. 5, (15), 65-71)

TEXT: TsNIIChermet developed two technological schemes of obtaining electrolytical Cr. According to scheme no. 1, a diaphragm bath is used for electrolysis of an aqueous solution containing 240 g/l Cr chloride and 75 - 125 g/l ammonium fluoboride, at 40 - 50°C;  $D_c$  is 15 - 20 amp/dm<sup>2</sup>, current efficiency is 76%; electric power consumption is 10 - 12 kw-h/kg Cr. According to scheme 2, electrolysis is made of molten salts NaCl and KCl (1 : 1) or NaCl, KCl and NaF (1 : 0.45 : 0.3) with 4 - 9 weight % concentration of Cr chloride at 750 - 850°C;  $D_c$  is 200 amp/dm<sup>2</sup>; electric power consumption is 7 - 9 kw-h/kg Cr. Approximate calculations yielded a cost price per 1 ton of Cr of about 1,500

Card 1/2

Preparation of chromium metal ...

S/137/62/000/004/031/201  
A006/A101

rubles, according to scheme 1, and of about 700 rubles according to scheme 2.  
There are 37 references.

A. Tseydler

[Abstracter's note: Complete translation]

Card 2/2

S/764/61/000/000/002/003

AUTHORS: Karsanov, G.V., Lyakhin, B.P., Magidson, I.A., Odoyevskiy, L.S.,  
Tirkina, A.N., Engineers; Mikhina, V.N., Orlova, S.Ye.,  
Candidates of Technical Sciences.

TITLE: Problems of the technology of metallic Chrome.

SOURCE: Razvitiye ferrosplavnoy promyshlennosti SSSR. Ed. by N.M. Dekhanov  
and others. Kiyev, Gostekhizdat USSR, 1961, 205-217.

TEXT: The paper reports briefly the results of experimental investigations performed at the Laboratory of Pure Metals and Alloys, TsNICherMet (Central Scientific Research Institute of Ferrous Metallurgy). The direct objective of the investigation is the development of a method for the making of metallic Cr that would obviate the defects (primarily the elevated content of impurities) exhibited by the aluminothermic method currently prevailing in the USSR. A brief state-of-the-art report comprises two graphic summaries of the processing of Cr-containing ores and the technology of the production of  $\text{Cr}_2\text{O}_3$  and  $\text{CrO}_3$ . Following a brief cost comparison as obtained from various sources it is stated that the utilization of chlorchrome as an initial source material broadens the perspectives of the making of pure chrome and reduces the production costs significantly. The waterless

Card 1/3

Problems of the technology of metallic Chrome.

S/764/61/000/000/002/003

chromechloride can be obtained directly from a chloridation of Cr ores with a minimal number of process operations and a high degree of purity. The present investigation was based primarily on a chloridation of briquets of ore and a C-containing reducer by gaseous Cl at high T, the removal of the chlorides of Cr, Fe, Al, and other elements, and their subsequent selective condensation. A schematic block diagram shows the process procedure for the obtainment of  $\text{CrCl}_3$ . The laboratory experiments show that under suitable process conditions the Cr is practically completely removed into the sublimate. The process is almost total at  $800^\circ\text{C}$ , but up to  $850^\circ$  it still proceeds slowly. A faster rate is obtained at  $900-950^\circ$ , but a further increase in temperature does not accelerate the process substantially. Hard coal was found to be the most inexpensive reducer. A cost comparison indicates the cost advantage of the new process. Electrolytic methods were tested at the Laboratory of Pure Metals and Alloys of the TsNICherMet for the production of metallic Cr, including: (a) The electrolysis of aqueous solutions of  $\text{CrO}_3$ , (b) the electrolysis of polychromatic solutions, (c) the electrolysis of aqueous solutions of salts of the trivalent Cr, primarily  $\text{CrCl}_3$ , and (d) the electrolysis of  $\text{CrCl}_3$  in salt fusions. The TsNICherMet developed the electrolytic method of the making of metallic Cr from aqueous solutions of  $\text{CrO}_3$  and introduced them into semi-industrial production at the Experimental Factory of the TsNICherMet in 1952. An experi-

Card 2/3

Problems of the technology of metallic Chrome.

S/764/61/000/000/002/003

mental production of chrome at the Zestafon Iron-Alloys Plant was performed by the staff of the Plant under the direction of G. Ya. Sioridze. The method is recommended for general industrial application. The high cost of the initial raw material is, to a degree, compensated by the high purity of the product obtained. Polychromatic solutions were developed at the Ural Polytechnical Institute imeni Kirov and at the Ural Scientific Research Institute for Metals. A systematic investigation of the electrolytic making of chrome from aqueous solutions of  $\text{CrCl}_3$  was performed by the Laboratory of Pure Metals and Alloys of the TsNICherMet. In addition to the methods already mentioned, an improved technology for the making of Chrome by the electrosilicothermic method was also performed. There are 10 figures and 2 tables; no references.

ASSOCIATION: TsNICherMet (Central Scientific Research Institute for Ferrous Metallurgy).

Card 3/3



34543

S/659/61/007/000/032/044  
D217/D303

18.12.51

AUTHORS: Karsanov, G.V., Tirkina, A.N., and Odoyevskiy, L.S.  
TITLE: Problems associated with the vacuum metallurgy of chromium  
SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, 276 - 279

TEXT: For the study of the basic principles and parameters of the process, the authors reduced chromic oxides with carbon in vacuum, using commercially pure chromic oxide. The latter was quenched from 800 - 900°C, sieved through a sieve of definite size, and the remainder was reground. Coke and wood charcoal, dried and ground to 100 mesh, were used as reducing agents. The required proportions of the charge materials were thoroughly mixed and briquetted in a 5-ton press into cylindrical briquettes of 35 mm diameter. A 5 % aqueous solution of chromic anhydride (4 ml/100 g of chromic oxide) was used as the binding material for reduction with coke and an aqueous solution of molasses (spec. grav. 1042 g/cm<sup>3</sup>) for reduction

Card 1/2

X

Problems associated with the ...

S/659/61/007/000/032/044  
D217/D303

with wood charcoal (20 ml/100 g chromic oxide). The briquettes for testing, containing 50 g of chromic oxide and the required weight of reducing agent, were placed into alumina crucibles and charged into an appropriate furnace. The kinetics of reduction were studied from the volume of gas evolved which was passed through a counter. The study of the influence of temperatures, weight of reducing agent, fineness of the chromic oxide and degree of vacuum on the kinetics of reduction of chromic oxide with carbon in vacuum has shown that the rate of reactions in the final stage of the process is limited by the rate of diffusion of the reagents. The kinetic curves of the diffusion period are parabolic in nature. The investigation showed the considerable advantages of the two-stage process, in which the first reduction stage is carried out without vacuum, and the product obtained after the second grinding operation and briquetting is further reduced in a vacuum furnace. There are 2 figures and 14 references: 9 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: W. J. Kroll and W.W. Schlechten, Trans. Electrochem. Soc., 93, 1948; US Pat. 2,833,645, May 6th, 1958; US Pat. 2,850,378, September 2nd, 1958.

Card 2/2

X

34544

S/659/61/007/000/033/044  
D205/D303

18.173✓  
AUTHORS:

Orlova, S.Ye., Mikhina, V.N., and Karsanov, G.V.

TITLE:

Production of chromium by electrolysis of polychromate and chromium chloride solutions

SOURCE:

Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, 280 - 285

TEXT: Owing to the high production costs of electrolytic chromium from solutions of chromic anhydride alternative electrolytic routes from the cheaper polychromates and chromium chloride solutions were investigated. The amount of electrical energy required is also anticipated to be lower. Lead cylindrical baths which also served as anodes and stainless steel, tubular, internally water-cooled cathodes were employed. The immersed cathode surface was 1 dcm<sup>2</sup>. Temperature was maintained by a water thermostat. The starting reagents were technical chromium anhydride, sodium dichromate and sulfuric acid. Current of 30 - 70 amperes was supplied. Duration of each run was about 7 hours. The following process parameters were studied:  
1) Concentration of polychromates in the electrolyte in the range  
Card 1/3

X

Production of chromium by ...

S/659/61/007/000/033/044  
D205/D303

150 - 450 g/l total  $\text{CrO}_3$ ; 2) The  $\text{Na/CrO}_3$  ratio in the range 0.0 - 0.163; 3) The  $\text{H}_2\text{SO}_4/\text{CrO}_3$  ratio in 0.01 - 0.15 range; 4) The electrolyte temperature in 20 - 60°C range; 5) The influence of  $\text{HNO}_3$  additions. The increase of  $\text{CrO}_3$  concentration from 150 to 350 g/l results in a higher yield of Cr with respect to the used current. Further increase to 450 g/l does not lead to further improvement. The increase of  $\text{Na/CrO}_3$  ratio to 0.115 does not reduce the chromium yield, but a further <sup>3</sup> increase reduces the yield, increases the energy requirements and produces dark, brittle metal. The possible accumulation of  $\text{H}_2\text{SO}_4$  will not worsen the process characteristics up to an amount of 5 - 7 % with respect to  $\text{CrO}_3$ ; further increase to 10 - 15 % reduces the yield sharply, but does not alter the metal quality. Temperature is an important factor. Above 35°C a sharp drop in the chromium yield is observed. Increase of the cathode current density from 30 to 70 amp/dcm<sup>2</sup> causes an increase in yield with respect to current but also increases the energy requirements. In some production methods the appearance of  $\text{HNO}_3$  impurities is

Card 2/3

X

MAGIDSON, I.A.; KARSANOV, G.V.; GERASIMOVA, M.I.; KALMYKOVA, T.V.

Investigation of the chlorination of chromium ores. Zhur. prikl.  
khim. 34 no.5:953-962 My '61. (MIRA 16:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii.

(Chlorination) (Chromium ores)

ORLOVA, S.Ye.; KARSANOV, G.V.; MIKHINA, V.N.; VOROB'YEVA, A.S.

Study of buffer properties, electric conductivity, and  
cathodic process in chromium hydrochloric electrolytes.  
Zhur.prikl.khim. 34 no.8:1759-1764 Ag '61. (MIRA 14:8)  
(Chromium chloride)  
(Electrolysis)

S/080/61/034/011/002/020  
D202/D301

AUTHORS: Magidson, I.A., Karsanov, G.V., Kalmykova, T.V., and  
Gerasimova, M.I.

TITLE: Selective chlorination of chromium ore

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 11, 1961,  
2391 - 2398

TEXT: The kinetics of chlorination of chromium ore components with a limited amount of carbon were studied. As starting materials a chromium ore, containing  $\text{Cr}_2\text{O}_3$  - 56,  $\text{FeO}$  - 4;  $\text{Fe}_2\text{O}_3$  - 11;  $\text{Al}_2\text{O}_3$  - 11,  $\text{SiO}_2$  - 3 and  $\text{MgO}$  - 15 %, and coal as reducing agent were used. These materials were ground, bricketed into tablets (8 mm in diameter and 3 - 4 mm thick), carbonized at  $800^\circ\text{C}$  and chlorinated in a 45 mm quartz tube, heated electrically. In the first experimental series the chlorination was carried out with and without coal, its amount being varied from 1.75 to 8.75 %; the rate of flow of the chlorine being 0.25 l/min., the temperature  $900^\circ$ , weight of samples 25 g. The authors found that iron elimination without reducing agent

Card 1/3

S/080/61/034/011/002/020  
D202/D301

Selective chlorination of ...

proceeded much more slowly and less completely than with about 2 % of the coal; under these conditions the iron elimination was completed in an hour, leaving a practically iron-free ore; but when coal content was augmented the elimination was slackened (practically finished in 3 hours) and chromium losses increased considerably (5 and 20 % respectively). In further experiments the author investigated the effect of the chlorine flow rate and that of ore and coal particle size on the chlorination of iron oxides. It was found that chlorine flow in the range 0.15 - 0.5 l/min. did not affect chlorination of the iron, but increased Cr losses. To avoid these losses the temperature was lowered to 700°C, but then iron elimination proceeded much more slowly and although at the beginning of chlorination, Cr losses were practically the same as at 900°C, the whole process lasted so long that total losses rose from 7 to 15 %. Particle size of the ore did not affect elimination of the iron which was completed in an hour (Cl flow = 0.15 l/min, coal ~2 %) but did affect Cr losses; with coarser ore (0.30 mm) they amount to 4 %, with finer grains - (0.07 mm) they rose to 7 %. All experimental results are given in the article, as well as a plan of a continuously working laboratory chlorination installation, on which

Card 2/3



S/080/61/034/011/002/020  
D202/D301

Selective chlorination of ...

it is seen that the chlorination was carried out with a chlorine-argon mixture. On this equipment the last experimental series was carried out under following conditions: coal - 2 %; particle size; ore 0.50 mm, coal 0.15 mm; chlorine flow - 0.3 l/min; temperature 900°C, time - 1 hour, the obtained product containing  $\text{Cr}_2\text{O}_3$  = 65.7% Fe - 0.02 % and the Cr losses being about 7 %. In the authors' opinion this product is suitable for production of metallic chromium. It is also mentioned that chromium ore chlorination experiments were carried out in the USSR in 1959 and 1960 by A.M. Polyakov and T.S. Shibneva in Unikhim (Ural Scientific Research Chemical Institute). There are 8 figures, 2 tables, and 14 references: 2 Soviet-bloc and 12 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: C. Hart, Canad.pat. 363,253, 1937; A.J. Gailey, Canad.Pat. 409,796, 1943; H. Erasmus, U.S. pat.2,480,184, 1949; H.S. Cooper, U.S.pat. 2,752,301, 1956.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metalurgii (Central Research Institute of Ferrous Metallurgy)

SUBMITTED: February 6, 1961  
Card 3/3

KARSANOV, G.V.; ODOYEVSKIY, L.S.; KHODKIN, V.I.; ZHURAVLEV, V.M.;  
MEL'NICHENKO, A.A.

Preparation of chromium metal by thermochemical reduction  
with silicon in electric furnaces. Stal' 22 no.2:135-137  
F '62. (MIRA 15:2)

(Chromium—Electrometallurgy)

34970  
S/080/62/035/002/008/022  
D202/D302

18.3100 (1087, 1521)

AUTHORS: Mikhina, V. N., Karsanov, G. V., Vorob'eva, A. S. and  
Magidson, I. A.

TITLE: Electrolytic production of metallic chromium from aq.  
chromic chloride

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no.2, 1962, 301-310

TEXT: The authors studied the effect of different factors on the output and quality of electrolytic chromium deposits from chromic chloride solutions with an  $\text{NH}_4\text{BF}_4$  buffer solution, such as the concentrations of  $\text{CrCl}_3$  and  $\text{NH}_4\text{BF}_4$ , temperature, current density,  $\text{Cr}^{2+}$ ,  $\text{Cr}^{3+}$  and  $\text{NH}_4^+$  concentration and pH. The experiments were carried out in a 10 amp electrolyzer, in which the cathode and anode compartments were separated by a porous diaphragm. The apparatus is described in detail and illustrated. The best results were obtained under the following conditions: Concentrations of  $\text{CrCl}_3$  and

Card 1/3

Electrolytic production of ...

S/080/62/035/002/008/022  
D202/D302

$\text{NH}_4\text{BF}_4$  in the cathode compartment - 1.5 g-mol/l and 1 g-mol/l respectively, temperature 40 - 50°C and c.d. about 15A/dm<sup>2</sup>; HCl concentration in the anode compartment 3.5 g-mol/l and that of  $\text{CrCl}_3$  - 1 g-mol/l. The average current yield of metallic chromium was 76% (in some expts. even 80 - 85%) and the specific electric energy consumption was 10 - 12 kW-hr/kg Cr. The results were checked on a large-scale laboratory equipment. Light, close-packed Cr deposits were obtained, easily detachable from the cathode. The current yield was 60 - 67% and energy consumption ~15 kW-hr/kg. The authors give a schematic diagram of the laboratory installation and propose a scheme for the industrial production of metallic Cr. The metal obtained on the large-scale installation contained the following impurities: Fe - 0.05 - 0.10; Si < 0.005; O - 0.3 - 0.8; H - 0.02 - 0.10; N - 0.07 - 0.20; C - 0.02 - 0.03; S -  $6 \times 10^{-3}$ ; Mg <  $5 \times 10^{-3}$ ; Bi -  $1 \times 10^{-4}$ %. There are 10 figures and 9 references: 7 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English language publi-

Card 2/3

Electrolytic production of ...

S/080/62/035/002/008/022  
D202/D302

cation reads as follows: H. R. Carveth and W. R. Mott, J. Phys.  
Chem., 9, 231, 1905.

SUBMITTED: February 17, 1961.

X

Card 3/3

MAGIDSON, I.A.; KARSANOV, G.V.; KALMYKOVA, T.V.

Role of carbon in high temperature chlorination of chromium  
ores. Zhur. prikl. khim. 36 no.10:2132-2138 0 '63.  
(MIRA 17:1)

L 23871-65 EWT(m)/EWP(t)/EWP(b) IJP(o) PD/JG/MLK

ACCESSION NR: AT5002491

8/0000/04/000/000/0112/0117

AUTHOR: Magidson, I.A.; Mikhina, V.N.; Karsanov, G.V.; Kalmykova, T.V.; Vorob'yeva, A.S. B+

TITLE: Semi-industrial installation for the production of electrolytic chromium from aqueous solutions of chromic chloride obtained by the chlorination of chromium ore

SOURCE: Vsesoyuznyy seminar po prikladnoy elektrolitiki, 5th, Dnepropetrovsk, 1962.  
Gidroelektrometallurgiya khloridov (Hydroelectrometallurgy of chlorides); doklady seminarov. Kiev, Naukova dumka, 1964, 112-117

TOPIC TAGS: chromium refining, chromium ore chlorination, chromic chloride reduction, electrolytic chromium, electrolyzer design

ABSTRACT: Previous attempts to produce a stable electrolyzer for the highly unstable chromic chloride were based on the use of neutral salts such as ammonium borofluoride and could never be applied industrially. The present report describes a semi-industrial installation for the production of anhydrous chromic chloride by chlorinating chrome ore in order to extract metallic chromium by electrolysis. It comprises two basic units, one of which chlorinates the ore while the second electrolyzes it; the unit produces 500 kg of

Card 1/5

L 23871-65

ACCESSION NR: AT5002491

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anhydrous chromic chloride per day and 75 kg of pure electrolytic chromium for refining in hydrogen (See Fig. 1 of the Enclosure). Chrome ore and coal ground to 0.15mm mesh are fed into the mixer 1, into which a doser 2 delivers alkaline sulfite-cellulose pulp at a specific gravity of 1.12. This charge goes into bunker 3, from which a revolving disk 4 throws it into the briquet press 5. Conveyor 6 carries the briquets to bunkers 7 (the dust being returned to the mixer 1. The whole briquets are fed into a resistance furnace 21, where they are coked for 4 hours at 800C in the absence of air. They then go to bunker 8 and drop onto sifter 9 (dust from which returns to the mixer). The whole briquets then enter the ShEP-10 electric shaft furnace, where they are chlorinated at 900-1000C. The furnace is 500 mm in diameter and its floor is covered with packed coal which serves as a resistance to the current supplied by 6 carbon electrodes. Chlorine enters the furnace from a battery of cylinders 30 through tank 29. All components in the ore are thus transformed into chlorides, all of which are removed except the liquid magnesium chloride, which flows into a container, while the chromic chloride collects in the condenser tower 11 working at 850-450C. The pure chromic chloride  $\text{CrCl}_3$  goes into preparing the electrolyte, while the ferric and aluminum chlorides precipitate in condenser 12. Waste gasses are water scrubbed in 13 and exhausted into the atmosphere at 14. The irrigating solution flows into vat 16 and is pumped back into the

Card 2/5



123871-65

ACCESSION NR: AT5002491

scrubber at 25. The chromic chloride is delivered into a reaction vessel 17 containing distilled water, a little concentrated hydrochloric acid from 22, ammonium borofluoride (as required), and a small quantity of catholyte containing bivalent chromium to dissolve the chloride in water. This solution contains 400 g/liter of chromic chloride and its pH is 0.2-0.3. It is filtered at 21 and fed as needed into the catholyte at 28. Electrolysis takes place in a hermetic diaphragm bath with anode and cathode compartments. The catholyte contains 240 g/liter of chromic chloride and 80-130 g/liter of ammonium borofluoride; its pH is 0.7-2.40 and it heats up to 40 or 50C during electrolysis. The hot catholyte flows continuously from the electrolytic bath 19 into a graphite heat exchanger 20, where it cools and collects in 28. Here it is adjusted and pumped by 15 through a doser 18 back into the bath. The anolyte (130 g/liter hydrochloric acid and 240 g/liter chromic chloride) is diluted with water during electrolysis and flows continuously from the bath into an evaporator 34, is cooled by graphite at 22 and collects in vat 30. Here it is adjusted with hydrochloric acid and pumped at 34 back into the electrolytic bath through doser 23. Chlorine from the anode compartment passes through the drier 26 and compressor 27, then goes to the chlorinator. Every 6 or 8 hours the deposit cathodes are moved to table 31, deposits are removed, and the cathodes cleaned at 32 in an alkaline solution. The chromium deposit is washed in a vat of distilled water 33 and then dried. Orig. art. has: 2 figures.

Card 3/5

L 23871-65

ACCESSION NR: AT5002491

ASSOCIATION: TsNIChermiet, Moscow

SUBMITTED: 06Jul64

ENCL: 01

SUB CODE: MM

NO REF SOV: 008

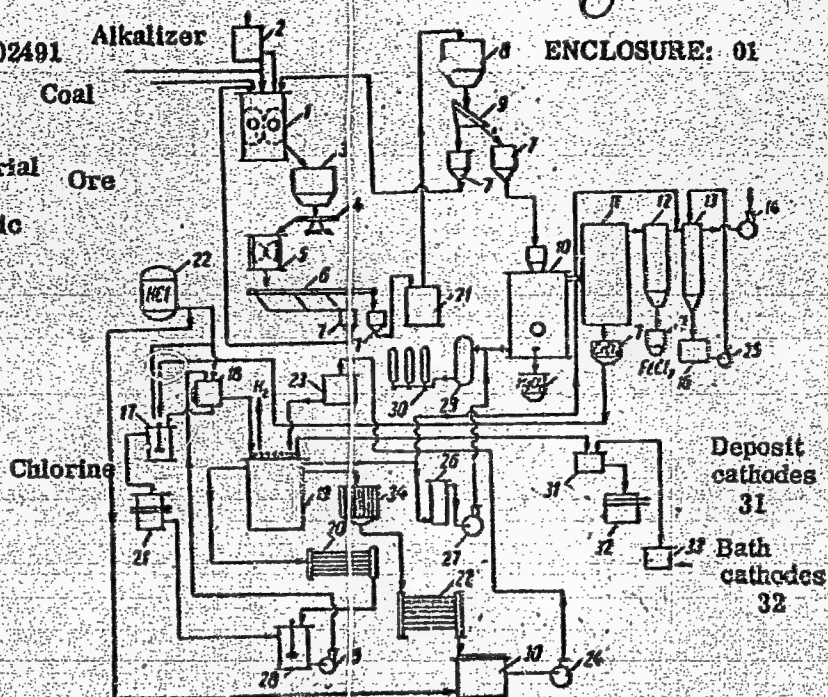
OTHER: 000

Card 4/5

L 23871-65

ACCESSION NR: AT5002491

Fig. 1. Technological layout of a semi-industrial installation for the production of electrolytic chromium.



L 36465-66 EWP(k)/EWP(h)/EWT(d)/EWT(m)/EWP(l)/EWP(v)/EWP(t)/ETI IJP(c) JD/HN

ACC NR: AP6021766

SOURCE CODE: UR/0413/66/000/012/0020/0021

INVENTOR: Yezerskiy, K. I.; Korovkin, D. B.; Karsanov, G. V.; Sigalov, Yu. M.;  
Fedorov, V. A.; Sautin, V. I.

40  
B

ORG: none

TITLE: A press for heating and extrusion of metals and alloys in vacuum or a neutral medium. Class 7, No. 182665

SOURCE: Izobreteniya, promyshlennyye obraboty, tovarnyye znaki, no. 12, 1966, 20-21

TOPIC TAGS: metal extrusion, hot extrusion, vacuum extrusion, extrusion press, METAL PRESS, VACUUM CHAMBER

ABSTRACT: This Author Certificate introduces a press for heating and extrusion of metals and alloys in vacuum or a neutral medium. The press consists of a vacuum-tight working chamber containing a heating unit, mechanism for feeding ingots, and a container with a die and a dummy block. To improve the efficiency, the press is equipped with compartments for dies, dummy blocks and ingots, with mechanisms for mounting dies and dummy blocks into the container, and with a water-cooled receiving bunker with air lock, all located within the working chamber. The vacuum-tight working chamber is formed by the walls of the press. Orig. art. has: 1 figure.

[MS]

SUB CODE: 13/ SUBM DATE: 29Feb64/ ATD PRESS: 5040

Card 1/1 *20*

UDC: 621.979:621.777.06-229.6

5 to 60 g/m<sup>2</sup>·hr as temperature increases from 40 to 80C; in 10% boric-acid solution

Card 1/2

UDC: 662.725 : 661

ACC NR: AP6034025

at 50—90C it does not exceed  $0.02 \text{ g/m}^2\text{-hr}$ , which means that even at 90C the boric acid dissolves beryllium at the same rate as 45—50% nitric-acid solution at 25C.  
Orig. art. has: 3 figures.

SUB CODE: 11/ SUBM DATE: 29Oct64/ ORIG REF: 003/ OTH REF: 004/

Card 2/2

ACC NR: AP7005593 (A) SOURCE CODE: UR/0413/67/000/002/0006/0007

INVENTOR: Mal'tsev, M. V.; Yezerkiy, K. I.; Karsanov, G. V.; Sigalov, Yu. M.; Titkov, V. I.; Sokolov, V. M.; Butnovskiy, B. G.; Novikov, O. K.; Dmitriyev, B. M.; Shmakov, Yu. V.; Loktionov, G. I.

ORG: none

TITLE: Vacuum rolling mill. Class 7, No. 190306

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 6-7

TOPIC TAGS: rolling mill, vacuum rolling ~~mill~~, continuous rolling ~~mill~~

ABSTRACT: This Author Certificate introduces a mill for continuous rolling in vacuum, consisting of a charge chamber, a working stand and an unloading chamber. The charge chamber is equipped with a mechanism which has frames with lifting bars located between the rollgang rollers. A modified mill is equipped with two-sectional, slotted driven screens located between the heating and the lifting-transporting devices in order to protect the latter from the action of high temperatures. A second

Card 1/2

UDC: 621.771.23

ACC NR: AP7005593

modification of the mill consists of sliding rollgangs for transporting workpieces from the charge chamber to the working stand and from the working stand to the unloading chamber, separated by vacuum locks. Orig. art. has; 1 figure. [MS]

SUB CODE: 13/ SUBM DATE: 07 Aug 63/ ATD PRESS: 5117

Card 2/2

KARSANOV, N.N.

USSR / Pharmacology, Toxicology. Cardiovascular Drugs. V

Abs Jour: Ref Zhur-Biol., No 9, 1958, 42402.

Author : ~~Karsanov, N. N.~~

Inst : Institute of Cardiology AN GruzSSR with the participation of the Institute of Physiology AN. USSR Tbilisi.

Title : Treatment of Hypertension with Thiocyanate Compounds and the Mechanism of Their Action.

Orig Pub: V. sb. Stenogr. otchet. nauchn. sessii In-ta cardiol. AN. GruzSSR s uchastiyen. In-ta, fiziol. AN USSR. Tbilisi, AN GruzSSR, 1956, 237-242. (A stenographic report of the scientific session of the Institute of Cardiology of the GruzSSR with the participation of the Institute of Physiology USSR)

Abstract: Seventy-five hypertensive patients, mainly stage II, were treated with ammonium rhodanate and potas-

Card 1/3

35

Card 2/3



KARACHOV, N. V.

Dissertation: "The Treatment of Hypertonic Disease with Ammonium Thiocyanate and the Mechanism of Its Action." Cand Med Sci, Tbilisi Medical Institute, Tbilisi, 1954.  
(Referativnyy Zhurnal--Khimiya, No 11, Moscow, Jun 54)

CO: SUK 318, 23 Dec 1954

*KARSANOV, N. V.*

USSR / Pharmacology, Toxicology. Cardiovascular Agents

U-6

Abs Jour : Referat Zh.-Biol., No 1, 1958, No 3507

Author : Karsanov, N. V.

Inst : Not given

Title : The Effect of the Ammonium Thiocyanate Treatment of Hypertension on Blood and Serum Proteins.

Orig Pub : Soobshch. AN Gruz SSR, 1956, 17, No 1, 61-63.

Abstract : A study was made of the effect of ammonium thiocyanate on the formed elements of blood and serum proteins in 47 hypertensive patients. In these series ammonium thiocyanate was used in combination with nicotinic acid. The CNS' concentration in blood was in the range 2.5-8 mg%. In approximately 50% of the patients the treatment with ammonium thiocyanate caused a moderate decrease in Hb and

Card 1/2

*Acad Sci Georgian SSR, Inst Clinical & Exptl.  
Cardiology, Tbilisi*

Abs Jour : Referat Zh.-Biol., No 1, 1958, No 3507

Abstract : RBC. In 8 of 40 patients a moderate decrease in the

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000720910013-8  
in the concentration of serum protein.

Card 2/2

*KARSANOV, N. V.*

GRUZ SSR / Human and Animal Physiology. Liver.

T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22343.

Author : Karsanov, N. V.

KARSANOV N. V.

USSR / Human and Animal Physiology (Normal and Pathological).  
Blood.

T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60346

Author : Karsanov, N. V.; Nakaidze, O. A.  
Inst : Institute of Clinical and Experimental Cardiology,  
AS GruzSSR

Title : Serum Proteins and Lipoproteins in Experimental  
Atherosclerosis

Orig Pub : Tr. In-t klinich, i eksperim. kardiol. AN GruzSSR, 1956  
(1957), 4, 413-417

Abstract : The increase in the total protein content in the serum  
of rabbits with experimental atherosclerosis was, on  
the average, 1.39, with an absolute increase in all  
fractions.  $\gamma$ -globulins increased 1.82 times,  $\beta$ -globulins -  
1.65, and albumins - 1.18 times; the albumin-globulin  
ratio decreased. The total content of lipoproteids and

Card 1/2

KARSANOV, N. V. (USSR)

"Contractile Proteins of the Myocardium During Cardiac Inadequacy."

Report presented at the 5th International Biochemistry Congress,  
Moscow, 10-16 Aug 1961

KARSANOV, Nikolay Vasil'yevich; KOMETIANI, P.A., red.; YANKOSHVILI,  
TS.A., red.izd-va; BOKERIA, E.B., tekhn. red.

[Contracting and sarcoplasmic proteins of the myocardium  
in cardiac insufficiency and in practically healthy persons]  
Sokratitel'nye i sarkoplazmennye belki miokarda pri nedostatoch-  
nosti serdtsa i u prakticheski zdorovykh liudei. Tbilisi,  
Izd-vo AN Gruz.SSR, 1963. 150 p. (MIRA 17:2)



TOGUNOVA, A.I.; KARSANOVA, A.V.; STEPANCHENOK, G.I.

Antigenic properties of Mycobacterium tuberculosis suspensions  
exposed to ultrasound. Zhur.mikrobiol.epid. i immun. 30 no.5:  
95-99 My '59. (MIRA 12:9)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei  
AN SSSR.

(MYCOBACTERIUM TUBERCULOSIS, eff. of radiations,  
ultrasonics, on antigenic properties (Rus))  
(ULTRASONICS, eff.  
on M. tuberc. antigenic properties (Rus))

BERKOVICH, Ye.S.; NESVIZHSKIY, O.A.; KRAPOSHINA, L.B.; LIBERMAN, V.I.;  
KARSANOVA, A.V.; LAKSHIN, S.V.

Determining relative wear resistance of deposits built-up by  
the T-590 electrode with various coating on the laboratory  
testing machine "rotating bowl." Tren.i izn.mash. no.15:31-46  
'62. (MIRA 15:4)

(Metals--Testing)

KARSANOVA, V. I.

137-1958-1-395

Translation from. Referativnyy zhurnal, Metallurgiya. 1958. Nr 1, p 63 (USSR)

AUTHORS: Lukashevich-Duvanova. Yu. T. Karsanova. V. I.

TITLE: The Behavior of Sulfur in the Alloying and Reduction of Steel  
(Povedeniye sery pri legirovanii i raskislenii stali)

PERIODICAL: V sb.: Fiz.-khim. osnovy proiz-va stali. Moscow, AN SSSR.  
1957, pp 590-601. Diskus. pp 650-655

ABSTRACT: Heats of carbon steel made in a 20-kg acid induction furnace were employed to investigate the effect on [O] and [S] of reduction (R) by 150 g Si-Mn-Ca and Si-Mn-Ca-Mg introduced with the flow in pouring, as compared to that of R by Fe-Si with Fe-Mn or Si-Mn, totaling 150 g. introduced into the crucible before pouring, with subsequent R by Al (5 g/t). The nonmetallic inclusions (NI) were studied by microscopic and microchemical methods. It was found that steel deoxidized by Fe-Mn, Fe-Si, and Al contained MnS and  $Al_2S_3$  uniformly distributed in the grains of metal. With R by Si-Mn and Al, grains of MnS,  $Al_2S_3$ , and FeS appeared, more rounded in shape and distributed along the grain boundaries. The hypothesis is advanced that  $Al_2S_3$  and MnS are precipitated on the crystals of  $Al_2O_3$  previously formed. On R by Si-Mn-Ca,

Card 1/2



137-1958-1-395

The Behavior of Sulfur in the Alloying and Reduction of Steel

black shells of sulfides of MnS, CaS, and FeS appeared over the silicate NI's distributed in the grains of metal. It is observed that the presence of large amounts of crystalline MnS in these NI's lowers their temperature of fusion and impairs their elimination from the metal. On R by Si-Mn-Ca-Mg, large balls of silicate inclusions in black envelopes of Mn, Fe, Ca, and Mg sulfides were observed. It is noted that the presence of Mg in their composition made for a reduction in fusion temperature, coalescence, and elimination from the metal. In this connection, the content of silicates and S diminished to 0.03 and 0.056%, respectively, as compared with 0.05 and 0.07% by other methods of R.

A. Sh.

1. Steel ~~Deoxidation~~ Effects of sulfur
2. Steel Manufacture
3. Sulfur ~~Chemical reactions~~

Card 2/2

KARSAULIDZE A.N.

KHACHATRYAN, A.S.; ABADZHEV, Yu.G.; ZOLOTAREV, T.L.; KONDAKHCHAN, V.S.;  
ATABEKOV, G.I.; GABASHVILI, N.V.; SISOYAN, G.A.; MAKHARADZE, G.K.;  
VORONIN, A.V.; GORTINSEIY, S.M.; KARSAULIDZE, A.N.

Professor A.IA Ter-Khachaturov, A.S.Khachatrian and others.

Elektrichestvo no.8:90 Ag '54.

(MLRA 7:8)

(Ter-Khachaturov, Artemii IAKovlevich, 1884- )

A H K S A U L I D Z E, A. N.

TRANSMISSION LINES

"Determination of the Breaking Sag in Conductors in Transmission Lines with Swinging Traverses and with Sliding Contacts," by Doctor of Technical Sciences, V. V. Burgsdorf and Candidate of Technical Sciences, A. N. Karsaulidze, Elektricheskiye Stantsii No. 5, May 1957, Pages 54 -- 57.

The construction of transmission lines for very high voltages with conductors of very large cross section increases the loads on the transmission towers and involves excessive construction costs. It therefore becomes necessary to employ various devices, such as swinging traverses and sliding contacts, to reduce the load on the towers. In addition, a break in the wire redistributes the stresses of the other sections of the line, and these must be compensated for by means of the sliding contacts and the swinging traverses. The article discusses the change in loading occurring upon a break in the wire, and shows how to employ these calculations to reduce the stresses on the towers and to optimize the location of the towers.

Card 1/1

- 45 -

*KARSAULIDZE*

GOLUBTSOV, R.A., inzh.; KARSAULIDZE, A.N., kand.tekhn.nauk.

Calculation of ~~straight~~ line poles of overhead lines for  
outage conditions. Elek.sta. 29 no.1:63-64 Ja '58. (MIRA 11:2)  
(Electric lines--Poles)

GOLUBTSOV, R.A., inzh.; KARSAULIDZE, A.N., kand.tekhn.nauk

Calculating steel-aluminum wires according to the new "Regulations  
for the installation of electric units." Elek.sta. 31 no.1:

60-62 Ja '60. (MIRA 13:5)

(Electric wiring--Tables, Calculations, etc.)

BOSHNYAKOVICH, A.D., inzh.; GOLUBTSOV, R.A., inzh.; KARSAULIDZE, A.N.,  
kand.tekhn.nauk

Calculation of steel reinforced aluminum lines using the con-  
sideration of a temporary stretch. Elek. sta. 31 no.9:50-54  
S '60. (MIRA 14:10)

(Electric lines—Overhead)

GOLUBTSOV, R.A., inzh.; KARSAULIDZE, A.N., kand.tekhn.nauk

Changes and additions to Chapter II-5 "Overhead power transmission lines with voltages in excess of 1,000 volts" of the "Regulations for the Installation of Electric Power Systems." Energetik 10 no.12:21-24 D '62. (MIRA 16:1)  
(Electric lines--Overhead) (Electric power distribution)

ANDRIYEVSKIY, Valeriy Nikolayevich; GOLOVANOV, Aleksandr Trofimovich;  
ZELICHENKO, Abram Simkhovich; KARSAULIDZE, A.N., red.;  
LARIONOV, G.Ye., tekhn. red.

[Operation of overhead power transmission lines] Eksplua-  
tatsiia vozdushnykh lini elektropredachi. Moskva, Gos-  
energoizdat, 1963. 527 p. (MIRA 17:2)



ANASTASIYEV, Petr Ivanovich; FROLOV, Yuriy Aleksandrovich;  
KARSAULIDZE, A.N., red.

[Construction and erection of 3-10 kv. lines; construction operations] Sooruzhenie i montazh linii 3-10 kv; stroitel'nye raboty. Moskva, Energiia, 1964. 46 p.  
(Biblioteka elektromontera, no.131) (MIRA 17:9)

KAYETANOVICH, Mikhail Mikhaylovich; YAKOBSON, Il'ya Abramovich;  
KARSAULIDZE, A.N., red.

[Splicing of the wires of overhead power transmission  
lines] Soedinenie provodov vozdushnykh lini' elektro-  
peredachi. Moskva, Energiia, 1964. 69 p. (Biblioteka  
elektromontera, no.132) (MIRA '17:9)

ANASTASIYEV, Petr Ivanovich; FROLOV, Yuriy Aleksandrovich;  
KARSAULIDZE, A.N., red.

[Construction and erection of 3-10 kv. power transmission  
lines; erection operations] Sooruzhenie i montazh lini  
3-10 kv; montazhnye raboty. Moskva, Energiia, 1965. 47 p.  
(Biblioteka elektromontera, no.156) (MIRA 18:6)

KARSAY A.

HUNGARY/Analytical Chemistry. Analysis of Inorganic Substances.

E-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43045.

Author : Erdey L., Karsay A.

Inst : Hungarian Academy of Sciences.

Title : Amperometric Determination of Ions of Trivalent Iron With Ascorbic Acid.

Orig Pub: Acta chim. Acad. sci. hung., 1956, 9, No 1-4, 43-48.

Abstract: It was found that aqueous solutions of ascorbic acid (I) can be used in amperometric titration of  $Fe^{3+}$  at concentrations as low as 0.001 M. On determination of 1-2 mg Fe the error is less than 1% which is commensurable with the accuracy of the other known methods. The advantages of I in comparison with other titration reagents are the ready preparation of a solution of I

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Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 14155.

Author : Erdely L., Karsai A.

Inst : Hungarian Academy of Sciences

Title : Indirect Method of Polarographic Determination of Calcium.

Orig Pub: Acta chim. Acad. sci. hu g., 1957, 11, No 1-2, 171-178.

Abstract: Description of a method for determining  $6.3 \cdot 10^{-4}$  to  $2 \cdot 10^{-2}$  mole/liter Ca, which is based on precipitation of Ca with bromanilic acid (I) and a subsequent determination of excess I, which is reduced polarographically at pH 4.5 and has an  $E_{1/2} = 0.21$  v (in relation to a saturated calomel electrode). On carrying out the analysis 5 ml 0.1% solution of I are mixed with 0.5-4 ml of a solution of Ca and after 10 minutes are added 5 ml 1 M  $\text{CH}_3\text{COOH}$  containing 3 ml 2 M  $\text{NH}_4\text{Cl}$  in 50 ml solution;  $\text{N}_2$  is passed for 5 minutes and polarography is carried out. Under the same condition the polarogram of

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How the best sector agronomist in the Nitra region works. p.322

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MECHANISACE ZEMEDELSTVI, Praha, Czechoslovakia, Vol. 5, No. 20, October 1955.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.

Unclassified.

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MECHANISACE ZEMEDELSTVI, Praha, Czechoslovakia, Vol. 5, No. 22, November 1955.

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Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

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Vol. 6, no. 4, Feb. 1956

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So: East European Accession, Vol. 6, No. 5, May 1957

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The Senec Machine-Tractor Station follows the example.

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Bakacs, Tibor dr.) I. Belosztalyanak (foorvos: Koranyi, Andras dr.)  
kozlemenye.

(ARGENTAFFINOMA,

intestine, small, metastases to liver.)

(INTESTINE, SMALL, neoplasms,

argentaffinoma, metastases to liver.)

(LIVER, neoplasms,

argentaffinoma, metastases from small intestine.)

17 APR 1957  
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dr.) Anyagosara (cukorbeteg) Rendeleseinek (foorvos: Bikich, Gyorgy,  
dr.) es Laboratoriumanak (foorvos: Hammer, Sarolta, dr.) kozlemenye.  
(DIABETES MELLITUS, ther.  
carbutamide (Hun))  
(UREA, related cpds.  
carbutamide ther. of diabetes mellitus (Hun))  
(SULFANILAMIDE, related cpds.  
same)

*MA R. 1, 1.*  
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1. 1st Department of Medicine, University Medical School, and Central Institute for Nervous and Mental Diseases, Budapest.

(ANESTHESIA, eff.

on antidiuresis & antisaluresis due to reduction of effective circulating blood volume in human volunteers)

(DIURESIS

antidiuresis & antisaluresis due to reduction of effective circulating blood volume, eff. of anesth. in human volunteers)

(BLOOD VOLUME

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dr.) I. sz. Belosztalyanak (foorvos: Koranyi, Andras, dr.) kozlomenye.

(THROMBOPHLEBITIS, ther.

axillary-subclavian thrombophlebitis, ethyl biscoumacetate  
with heparin (Hun))

(ETHYL BISCOUMACETATE, ther. use

thrombophlebitis, axillary-subclavian, with heparin (Hun))

(HEPARIN, ther. use

thrombophlebitis, axillary-subclavian, with ethyl  
biscoumacetate (Hun))

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1. A Janos Korhaz-rendelointezet (igazgato: Tako Jozsef dr.) I. sz.  
Belosztalyanak (foorvos: Koranyi Andras dr.) kozlemenye.

(CEREBRAL HEMORRHAGE, ther.

ACTH intravenous drop infusion (Hun))

(ACTH, ther. use

cerebral hemorrh., intravenous drop infusion (Hun))

KARSAY, Gyula, dr.; KOZMA, György, dr.; ARATO, Karoly, dr.

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1. Fovarosí János Korhaz, I. sz. Bel- és Röntgenosztály.  
(HERNIA VENTRAL)



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The physical properties of cast iron can be influenced by the formation of graphite. A description is given of the draft of Hungarian standards for modified cast iron. The physical properties of modified cast iron, such as fatigue limit, resistance to wear, machinability, resistance to corrosion and heat, are described. Modified cast-iron objects are seldom subjected to heat treatment since articulated castings may easily break thereby. Modified cast iron is not just ordinary cast iron of a higher strength; it has some very valuable properties such as insensitiveness to differences in wall thickness, resistance to wear, insensitiveness to chemicals, etc. The article concludes by listing some forms of its application in practice.

*Courtesy of Hungarian Technica Abstracts*

1. B

KARSAV ISTVAN

30

V15360\* The Crystallization of Graphite in Cast Iron. A  
grafitnak az öntöttvasban való kristályosodásáról. I. (Hungarian.) István Karsav. *Ontide*, v. 8, no. 8, Aug. 1955, p. 169-170.  
Proposes new hypothesis for the interpretation of all aspects of the crystallization process. Diagram, micrographs. (To be continued.)

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713. On the machined surfaces of grey cast iron. I. Karasay.  
Gip. Vol. 7, 1955, No. 11, pp. 428-430, 8 figs.

Porosities always occur on the surfaces produced by cutting operations on grey cast iron as a result of the tearing out of the graphite plaques. Namely, the cutting tool lifts up those graphite plaques which are located at an adequately acute angle to the travel of the cutting tool and thereby also breaks off the metal particles covering the plaques. In finishing operations the diameters of the porosities approximately conform to those of the graphite plaques, being max. 600  $\mu$  for ordinary castings in general. In case of roughing operations and of irregular graphite distribution the porosity dimensions are bigger. In the course of operational wear on the one hand the number of porosities reduces while on the other a certain increase appears due to the fatigue loading of the metal in which the graphite is embedded. Porosities have a favourable effect on surface wear owing to their oil-retaining ability. Optimum porosity dimensions for resistance to wear are 0.1 to 0.5 mm.

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21